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WHAT IS CLAIMED IS:

1. An endoluminal prosthesis, comprising:
a tubular wire support having a proximal end, a distal end and a central lumen extending therethrough;
5 the wire support comprising at least a first and a second axially adjacent tubular segment, joined by a connector extending therebetween;
wherein the first and second segments and the connector are formed from a single length of wire.
2. An endoluminal prosthesis as in Claim 1, comprising at least three
10 segments and two connectors.
3. An endoluminal prosthesis as in Claim 1, comprising at least five segments and four connectors.
4. An endoluminal prosthesis as in Claim 1, wherein the wire in each segment comprises a series of proximal bends, a series of distal bends, creating a series of strut
15 segments connecting the proximal bends and distal bends to form a tubular segment wall.
5. An endoluminal prosthesis as in Claim 4, wherein at least some of the strut segments are substantially linear.
6. An endoluminal prosthesis as in Claim 4, further comprising an eye on at least some of the bends.
- 20 7. An endoluminal prosthesis as in Claim 6, wherein one or more eyes on a distal end of the first tubular segment are connected to one or more corresponding eyes on a proximal end of the second tubular segment.
8. An endoluminal prosthesis as in Claim 7, wherein the corresponding eyes are connected with a suture, or ring.
- 25 9. An endoluminal prosthesis as in Claim 4, wherein each segment comprises from about 4 proximal bends to about 12 proximal bends.
10. An endoluminal prosthesis as in Claim 1, having at least a proximal segment, an intermediate segment and a distal segment, wherein the prosthesis is expandable from a reduced cross section to an expanded cross section.
- 30 11. An endoluminal prosthesis as in Claim 10, wherein at least a portion of the proximal segment and distal segment is larger in cross section than the central segment when the prosthesis is in the expanded cross section.

12. An endoluminal prosthesis as in Claim 1, further comprising a polymeric layer on the wire support.
13. An endoluminal prosthesis as in Claim 12, wherein the layer comprises a tubular PTFE sleeve surrounding at least a central portion of the prosthesis.
- 5 14. A method of making an endoluminal prosthesis, comprising the steps of:
providing a length of wire;
forming the wire into two or more zig-zag sections, each zig-zag section separated by a crosslink;
rolling the formed wire about an axis to produce a series of tubular
10 elements positioned along the axis such that each tubular element is connected to the adjacent tubular element by a link.
15. A method as in Claim 14, further comprising the step of positioning a tubular polymeric sleeve concentrically on at least one of the tubular elements.
- 15 16. A method as in Claim 15, wherein the positioning step comprises positioning the tubular polymeric sleeve concentrically on the outside surface of the tubular element.
17. A method as in Claim 16, wherein the tubular polymeric sleeve comprises PTFE.
18. A multizone endoluminal prosthesis, comprising:
20 a tubular wire support having a proximal end, a distal end, and a central lumen extending therethrough;
the wire support comprising at least a first and a second axially adjacent tubular segments, joined by a connector extending therebetween;
wherein the first tubular segment has a different radial strength than the
25 second tubular segment.
19. An endoluminal prosthesis as in Claim 18, further comprising a third tubular segment, wherein at least one of the tubular segments has a different radial strength than the other two tubular segments.
20. An endoluminal prosthesis as in Claim 19, wherein a proximal end of the
30 prosthesis is self expandable to a greater diameter than a central region of the prosthesis.
21. An endoluminal prosthesis, comprising an elongate flexible wire, formed into a plurality of axially adjacent tubular segments spaced along an axis, each tubular

segment comprising a zig zag section of the wire, having a plurality of proximal bends and distal bends, with the wire continuing between each adjacent tubular segment, wherein the prosthesis is radially compressible into a first, reduced cross sectional configuration for implantation into a body lumen, and self expandable to a second, enlarged cross sectional configuration at a treatment site in a body lumen.

22. An endoluminal prosthesis as in Claim 21, comprising at least three segments formed from said wire.

23. An endoluminal prosthesis as in Claim 22, further comprising an outer tubular sleeve surrounding at least a portion of the prosthesis.

24. An endoluminal prosthesis as in Claim 23, wherein the sleeve further comprises at least one lateral perfusion port extending therethrough.

25. An endoluminal prosthesis as in Claim 22, wherein the prosthesis has a proximal end and a distal end, and at least one of the proximal end and distal end as expandable to a larger diameter than a central section of the prosthesis in an unconstrained expansion.

26. An endoluminal prosthesis as in Claim 21, wherein at least one distal bend on a first segment is connected to at least one proximal bend from an adjacent segment.

27. An endoluminal prosthesis as in Claim 26, wherein the connection comprises a pivotable connection.

28. An endoluminal prosthesis as in Claim 27, wherein the connection comprises a metal link.

29. An endoluminal prosthesis as in Claim 27, wherein the connection comprises a suture.

30. An endoluminal prosthesis as in Claim 21, wherein the prosthesis has an expansion ratio of at least about 1:4.

31. An endoluminal prosthesis as in Claim 30, wherein the prosthesis has an expansion ratio of at least about 1:5.

32. An endoluminal prosthesis as in Claim 21, wherein the prosthesis has an expanded diameter of at least about 20 mm - 30 mm in an unconstrained expansion, and the prosthesis is implantable using a catheter no greater than about 16 French.

33. A prosthesis as in Claim 32, wherein the prosthesis has an expanded diameter of at least about 25 mm, and is implantable on a delivery device having a diameter of no more than about 16 French.

34. A method of implanting an endoluminal vascular prosthesis, comprising
5 the steps of:

providing a self expandable endoluminal vascular prosthesis, having a proximal end, a distal end and a central lumen extending therethrough, said prosthesis expandable from a first, reduced diameter to a second, enlarged diameter;

10 mounting the prosthesis on a catheter, such that when the prosthesis is in the reduced diameter configuration on the catheter, the catheter diameter through the prosthesis is no more than about 16 French;

introducing the catheter into a body lumen, and positioning the prosthesis at a treatment site in the body lumen;

15 releasing the prosthesis at the treatment site, such that the prosthesis expands from the first diameter to the second diameter;

wherein the second diameter is at least about 20 mm.